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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/654,516	09/01/2000	Louise Farrand	MERCK-2155	6056

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EXAMINER

OH, TAYLOR V

ART UNIT

PAPER NUMBER

1625

DATE MAILED: 02/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/654,516

Applicant(s)

FARRAND ET AL.

Examiner

Taylor Victor Oh

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 11-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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The Status of Claims:

Claims 1-10 are pending.

Claims 1-10 have been rejected.

Claims 11-16 have been withdrawn.

***Election/Restrictions***

Applicant's election with traverse of Group I in Paper No. 8 is acknowledged. The traversal is on the ground(s) that Claims 14-16 do not require the particulars of claims 1-10, claim 11 or claims 12-13, which is incorrect. All the dependent claims require the particulars of claim 1. Claims 14-16 also require polarizer elements, which does change the fact that it still requires the polymer defined by the other claims. Furthermore, Claims 14-16 require that other elements is what makes them "combination " claims, thereby making them patentably indistinct. Moreover, applicants see no basis on the record for the allegation that Groups I, II, III, and IV find another use as an adhesive or cosmetic.

This is not found persuasive because the prior art Kim et al (U.S. 5,498,358) does teach that a lubricant composition can contain at least one mesogenic segment. From this teaching, Group I can be used in a different composition, such as the lubricant composition other than Group IV (claims 14-16); therefore, the presence of Group I is absolutely not required as one of polarizer elements. Furthermore, the lubricant composition and polarizer elements are two distinctive inventive entities.

The requirement is still deemed proper and is therefore made FINAL.

Claims 11-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected groups II, III, and IV, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 8.

***Claim Rejections - 35 USC § 112***

Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for those particular compounds [Scheme 1-16; V1-15; Example 1 (Scheme 6-15)] represented by the structural formula (see, e.g., pages 6-20 of the specification) disclosed in the specification, does not reasonably provide enablement for producing all the thousands of compounds encompassed by the claimed multireactive polymerizable mesogenic compounds. The instant specification fails to provide information that would allow the skilled artisan to practice the instant invention without **undue experimentation**.

Attention is directed to *In re Wands*, 8 USPQ2d 1400 (CAFC 1988) at 1404 where the court set forth the eight factors to consider when assessing if a disclosure would have required undue experimentation, citing *Ex Parte Forman*, 230 USPQ 546 (BdApls 1986) at 547 the court recited eight factors:

- 1) the quantity of experimentation necessary,

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- 2) the amount of direction or guidance provided,
- 3) the presence or absence of working examples,
- 4) the nature of the invention,
- 5) the state of the prior art,
- 6) the relative skill of those in the art,
- 7) the predictability of the art, and
- 8) the breath of the claims.

In the instant case, the claims encompass thousands of compounds represented in the structural formula. However, applicants' specification provide the only 41 particular exemplified compounds. Furthermore, the specification provides no evidence of producing all the multireactive polymerizable mesogenic compounds according to Scheme 1-16 in the specification. Thus, the examples herein have failed to provide sufficient working examples to support the production of thousands of compounds represented in the structural formula.

Claims 1 and 2 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a polymerizable group, such as an acrylate group, a methacrylate group, a vinyl or vinyloxy group, an epoxy group, a styrene group, , or a propenyl ether group, does not reasonably provide enablement for all the polymerizable groups known in the field of organic chemistry. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to

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include all the polymerizable groups unrelated to the invention commensurate in scope with these claims.

The specification, while being enabling for a mesogenic group, such as an -Phe-Z-Phe-, -Phe-Z-Cye-, -Phe-Z-Phe-Z-Cye-, -Cye-Z-Cyc-, etc., in which Z can be -COO-, -OCO-, -CH<sub>2</sub>CH<sub>2</sub>-, -C=C- or a single bond, does not reasonably provide enablement for all the mesogenic groups known in the field of organic chemistry. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to include all the mesogenic groups unrelated to the invention commensurate in scope with these claims.

The specification, while being enabling for a non-polymerizable group, such as an halogen, CN, OCN, NCS, NO<sub>2</sub>, etc., does not reasonably provide enablement for all the non-polymerizable groups known in the field of organic chemistry. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to include all the non-polymerizable groups unrelated to the invention commensurate in scope with these claims.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A phrase "a chiral or achiral alkyl radical" is written. However, this passage is vague and indefinite because a compound needs to be shown as either the S or R configuration in a spatial arrangement when it has a chiral center. Therefore, an appropriate correction is required.

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Applicants' elected species shown in Example 1 is allowable.

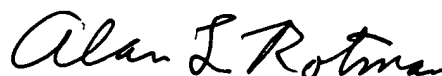
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 703-305-0809. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alan Rotman can be reached on 703-308-4698. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-2742 for regular communications and 703-305-7401 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.



February 5, 2003



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